Nutrition News

FOOD PROBLEMS IN LIBERATED COUNTRIES

E. J. BIGWOOD, M.D., Professor of Physiological Chemistry and Nutrition, Brussels University, Adviser to the Belgian Government

The majority of Belgium's population was kept for four and a half years on diets varying from 900 to 2000 calories per capita a day. The outstanding pathological findings which characterize the nutritional status of the people are considerable loss of body weight, stunted growth, nutritional edema, rickets, nutritional anemia, considerable increase in the incidence and modification of the clinical features of tuberculosis, and rise in susceptibility to infections in general. These last two manifestations as it clearly appears from Professor P. R. Cannon's observations on antibody formation, as well as the classical finding of nutritional edema, are closely related to protein deficiency.

Belgium's food supplies in prewar normal times furnished 75 to 85 grammes of protein per capita per day in our entire country, of which 35 to 40% was animal protein. Under the worst circumstances, this level dropped to less than 30 grammes in war time. Animal protein became scarcest.

Indigenous production of dairy products and meat has deteriorated drastically on account of abnormal slaughtering, scorched earth practices and considerable loss in yield of production per surviving domestic animal. Animals produced less because of the lack of adequate feeding stuffs.

It is now well known that the mere increase of the total protein intake is not the only result to aim at. An adequately balanced supply of the few essential amino acids must be sought for in order to meet the purpose. Milk, cheese, eggs and meat are known to supply the most suitable proteins required in this respect.

Decreased Protein Supply

But now, let us consider the problem from the point of view of the world-wide supply position versus the world requirements. Clearly animal protein is one of the items which are the shortest in supply as well as the most badly needed.

There are, fortunately, other means of furnishing adequately balanced essential amino acids of vegetable origin which are in a less tight supply position. Soya flour in conjunction with wheat flour protein; adequately defatted wheat germ protein fortification of starchy foods, and also dried brewer's yeast as enriching agents are very efficient ways of correcting protein food deficiency in the world today. This substitution will help to fill the gaps wherever it will be materially impossible to resort to the very efficient method of using dried milk as a fortifying material in processed foods.

One cannot stress enough the point that this more classical way of reaching the goal stays among the most desirable ones to use. This is true because milk proteins will meet the proper amino acid requirements, and milk will also form the largest source of highly absorbable calcium.

Doctor Bigwood

In our prewar diets, at least two thirds of the calcium intake was secured by dairy products. Calcium deficiency has been another outstanding feature of wartime malnutrition. Remember that I have cited rickets as one of the major manifestations of deficiency diseases during this war.

The greatest effort must therefore be made to favor an increased milk production throughout the world notwithstanding the efforts to be made in parallel with the first in order to make the most extended possible use of other sources of high quality proteins of vegetable origin.

Glances AT NUTRITION RESEARCH

Much of present-day research work reflects the influence of the war upon food supplies, the consumption of nutrients, and dietary habits. The following abstracts illustrate current trends in nutrition research with particular emphasis on protein studies.

Protein in the Prenatal Diet—It has been shown that the amount of protein in the diet of the mother during pregnancy may be an important factor in determining the general physical condition of the child at birth. A study of the prenatal diets of 216 women revealed a significant relationship between the protein content of the maternal diet and the birth length of the infant.

The increase in birth length could be demonstrated with each 10 gram increase in protein, irrespective of the mother's height. An increase in birth weight was also noted. Apparently offspring which are short and light in weight may be expected of mothers who receive less than 75 grams of protein daily during the latter half of pregnancy.

—Mil. Mem. Fund Quar. 23:54 (Jan.) 1945.

High and Low Protein Diets—Twenty-four healthy young men, engaged in various types of manual labor, were maintained on different intakes of protein for a period of two months. Eight of the group consumed their usual diet, eight were given a diet containing 50 grams of protein, and eight received 150 grams of protein. Work efficiency was measured by standardized tests.

During the period of the study, no measurable influence, neither harmful nor beneficial, on the physical vigor and efficiency of the men was observed, regardless of the protein intake.

—J. Nut. 28:273 (Oct.) 1944.

Protein in the Treatment of Burns—In cases of severe burns, a considerable amount of protein is lost from the body either by way of the kidney or in the exudate from the burns. A casein digest, given orally, to three patients suffering from burns involving 10, 30, and 50 per cent of the body area was found to be effective.

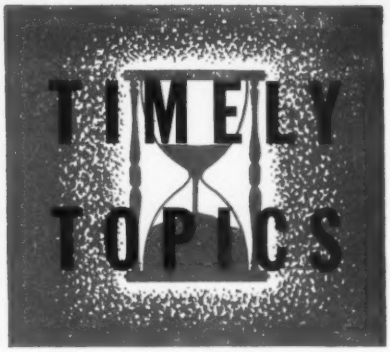
The digest was better tolerated and better utilized by these patients than were ordinary protein foods. More nitrogen was provided in this manner than could have been supplied by either food protein or plasma transfusions.

—Ann. Surg. 119:815 (June) 1944.

Diet and Congenital Rickets — When rats were bred on a vitamin D deficient diet, about 45 per cent of the young were born with skeletal malformations somewhat similar to those observed in rickets. These abnormalities were not discernible by external inspection. The bones of the legs were cupped and bent and there was a broadening and sharp angulation of the ribs. Animals which had been fed adequate quantities of vitamin D during pregnancy produced normal offspring.

Microscopic examination revealed that the bone structure was unlike that usually observed in typical rickets. Apparently the manifestation of a vitamin D deficiency before birth differs from that which can be produced in the young rat after its birth.

—Mil. Mem. Fund Quar. 23:66 (Jan.) 1945.



Dr. L. J. Bigwood

Dr. Bigwood, author of the leading article in this issue, is Professor of Physiological Chemistry and Nutrition at Brussels University, and is Adviser to the Belgian government. Before the war, Dr. Bigwood was also Secretary General of the National Nutrition Committee of the Ministry of Health, and he represented Belgium in various international conferences on health at the League of Nations. Dr. Bigwood is Belgium's representative on several standing technical committees of the United Nations Relief and Rehabilitation Administration.

Inter-American Program

An Inter-American Cooperative Health Program is under way in 18 South American and Central American countries. It is the purpose of this program to advance special health and sanitation measures of which health education is a part. Under this plan, in the past year, 15 Latin American students have come to the United States to study health education.

International Food Plans

Plans are being made to improve food and agriculture throughout the world. At the international Hot Springs Food Conference in 1943, an Interim Commission was delegated to draw up plans for a permanent world food and agriculture body—the United Nations Food and Agriculture Organization. Five major areas of work are suggested for this proposed body: nutrition and food management, agricultural production, forestry, fisheries, and statistics.

BETTER NUTRITION — A NATIONAL AND INTERNATIONAL GOAL

By Anna dePlanter Bowes, Chief, Division of Nutrition, Pennsylvania Department of Health

The challenge of improved nutrition is universal. Never before have so many people and countries pooled technical skills and training, available resources and research facilities for a common goal. Deep concern for human welfare has always been the driving power behind the arduous labors of eminent physicians and scientists. Applying the facts these leaders have learned and shared has become a special wartime responsibility for Americans and all other free people.

Early in the war every possible effort was made to have men and women in the armed services be immediate recipients of accumulated nutrition research. Study continues in many laboratories so that food and nutrition may make their maximum contribution to morale, endurance, and victory.

On the home front, vigorous steps have also been taken to improve health at all ages. The National Nutrition Program through state and county organizations, has aimed to bring pertinent facts to every family. The press, radio, movies, magazines, the food and other industries, restaurants and schools have joined forces with national and local institutions to present, popularize and reiterate vital food facts.

Millions of Americans are better fed today than ever before. The enrichment of bread, flour, and cereals has actually put more iron, thiamine, riboflavin, and niacin into their daily diet. Enacted as a wartime food order, six states have already passed legislation to continue the benefits of enrichment. An immediate responsibility of legislators and citizens in other states is to insure this dietary protection in postwar days. The enrichment program provides on a national scale, the cheapest and most effective contribution toward better nutrition.

Improving Nutrition for Special Groups

Our rising birth rate provides special opportunities to apply research findings. Long term studies in England, Canada, and the United States offer challenging proof of the desirability of more adequate prenatal diets. Reduction of toxemia, eclampsia, still births, malformation, infant mortality, and morbidity is a concrete result of improving dietary adequacy. Healthier mothers and babies can and should be a nation's first concern. The close relation between adequate protein, minerals, and vitamins in the mother's diet to the condition of her baby were never better understood. Are we applying these known facts in direct proportion to their value for healthier Americans?

Building stronger, sturdier infants and pre-school children may go much further than is now generally appreciated in helping to improve dental conditions of both children and adults. Dental caries has been called "our most widespread nutritional scourge."

Proper school lunches can help young Americans appreciate better nutrition. Learning to eat new foods and what constitutes adequate lunches for growth and health are among the most important things our schools can teach. Many chronic deficiencies in adults have their origin in poor nutrition during childhood.

The high production goals of industry have convinced many adults of their "half health." Chronic malnutrition has made their maximum war contribution impossible. In war or peace, the worker's hand, eye, and nerves are controlled to no small degree by nutritional adequacy. This is especially true of older men and women now comprising so many of our industrial workers.

The most convincing evidence that better nutrition pays big dividends comes from clinical studies in hospitals. Curing chronic malnutrition requires long, persistent treatment of months or even years. Massive and expensive dosage is necessary to overcome even in part the results of earlier and long standing deficiencies. Truly, it is cheaper to prevent than cure.

Disraeli while Prime Minister of England said, "The health of the people is really the foundation upon which all our happiness and all our powers as a state depend." Existing knowledge indicates that no one factor so affects health as the food people eat.

TEACHING NUTRITION THROUGH AN EXHIBIT CENTER

By Clara M. Taylor, Ph. D., Associate Professor of Nutrition, Teachers College, Columbia University and Marion E. French, Nutritionist, Nutrition Division, New York City Department of Health

The Exhibit Committee of the New York City Food and Nutrition Committee has established an exhibit center where visual nutrition aids of all types are on display constantly. The authors serve as chairman and co-chairman respectively of the Exhibit Committee. The project is described here for the information of committees and individuals who may wish to undertake a similar activity.

The exhibits are housed at the Nutrition Center, 45 Lafayette Street, provided by the New York City Health Department, which serves also as nutrition information center as well as headquarters for the executive secretary for the Nutrition Committee.

The exhibits, which are changed frequently according to definite plan, serve as a center for: (1) the stimulation of interest in the use of visual aids, (2) the exchange of ideas for exhibits, (3) the display of available materials and effective ways of using them, (4) the development of new materials for exhibits, (5) making exhibit ideas available to those who, either for lack of time or the need of assistance or both, are unable to work out their own ideas, (6) the further development of interest in better nutrition for all.

The exhibit center also provides a place where large educational exhibits can be displayed such as the Dehydrated Food Exhibit loaned by the U. S. Department of Agriculture and

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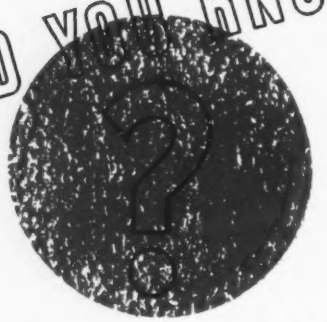
DID YOU KNOW



—that American flyers want a glass of milk, first, when they return from missions over enemy territory?

—that a high vitamin C sirup made from tangerines has been developed?

—that allspice is not a blend of different spices, but the unripe berry of a wild, tropical evergreen tree?

—that hens are being bred to lay eggs with stronger shells to better protect the contents of the egg?

—that a wheat sirup is being made which will be used much like corn sirup, maple sirup, and other table sirups?

—that carbon dioxide can now be used to extract casein from milk? It has been found better than acid to cause the separation of casein curds.

—that floating refrigerators have been developed that carry ice cream to the Pacific war theater? There is also a special freezing unit which turns out 10 gallons of ice cream every seven minutes.

—that the rumen of the cow is really a vitamin factory? Bacteria in the rumen work on the often low-vitamin feeds and manufacture B-complex vitamins.

—that nasturtiums have a high vitamin C content? They contain four to ten times as much vitamin C as lettuce.

THINGS YOU'LL LIKE TO READ

FOOD VALUES OF PORTIONS COMMONLY USED — Anna dePlanter Bowes, M. A. and Charles F. Church, M. D., M. S. Philadelphia Child Health Society. 1944. $1.50.

This book recently has been revised to include additional kinds of foods and gives the latest figures on the mineral and vitamin content of these foods. The effects of different methods of food preservation and cookery on losses in food value are also taken up. It is of use to nutritionists, public health nurses, dental hygienists, and college students who wish a comprehensive table of food values for reference purposes.

EAT A GOOD BREAKFAST— to start a good day. U. S. Department of Agriculture, Bureau of Human Nutrition and Home Economics, Washington, D. C. 1944.

The reasons for eating a good breakfast are attractively presented in this leaflet. It is practical and contains information which can be used in nutrition programs as a handout leaflet to the general public.

HOME IS WHAT YOU MAKE IT— Edited by Jane Tiffany Wagner for the Homemaking Broadcast Series of the NBC University of the Air. Handbook, Vol. 1. 1944-45.

A symposium of articles written by educators and doctors on subjects relating to the home, make this booklet of use to the general public as well as to professional people. Food and nutrition, family relations, housing, health, and clothing are a few of the subjects which are taken up.

CHILD GUIDANCE LEAFLETS — Series on Eating. 13 leaflets. New York City Committee on Mental Hygiene. New York, 1944. 40 cents.

Child guidance leaflets come in sets of 13—eight directed to parents and five to trained personnel. The leaflets include information on all phases of the child feeding problem and offer constructive suggestions on how to meet eating problems presented at different stages of the child's development.

TEACHING NUTRITION THROUGH AN EXHIBIT CENTER

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Britain's Wartime Nutrition Exhibit loaned by the British Information Services. Such exhibits can be displayed as long as interest is maintained and can be used as a means of attracting people to the Nutrition Center.

Students of all ages come in groups under the guidance of a teacher to see the special exhibits and to get ideas for exhibits which they can prepare for their school bulletin boards. Librarians, health educators, nurses, and others interested in setting up nutrition exhibits make use of the center. Many out-of-town guests make a special trip to the center to get new ideas.

A Word of Advice

Committee cooperation. An exhibit committee works more efficiently if it is not too large and if it consists of nutritionists, artists, and those trained in advertising or display techniques. Larger sub-committees can be organized to plan and set up special exhibits.

Financing. A budget is necessary with which to buy exhibit materials, such as paper, posterboard, letters, paste, and paint, as well as wall boards and display cases. If the budget permits, an artist may be employed to assist with lettering and the preparation of such illustrative materials as food models. Actual food may, of course, be exhibited. Much work can be done by volunteers.

Publicity. Following are outlets for announcements and stories of the exhibit center; the bi-monthly publication of the New York City Food and Nutrition Committee, sent to all members of the large committee (representatives of 92 agencies); special letters advertising special exhibits; local newspapers which are always glad to run features; radio announcements; publications of member agencies which carry announcements to school teachers, public health nurses, doctors, librarians, and business men.